



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,716	10/03/2001	Yau Wai Lucas Hui	851663.416USPC	5921

500 7590 05/02/2005

SEED INTELLECTUAL PROPERTY LAW GROUP PLLC
701 FIFTH AVE
SUITE 6300
SEATTLE, WA 98104-7092

EXAMINER

WONG, ALLEN C

ART UNIT	PAPER NUMBER
----------	--------------

2613

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/646,716

Applicant(s)

HUI ET AL.

Examiner

Allen Wong

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 12-14, 19, 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 4-11, 15-18 and 20-23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/22/01, 12/7/01</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

1. A substitute specification sent on 4/18/05 of the claims is required pursuant to 37 CFR 1.125(a) because the all of the components, ie. abstract, claims, disclosure and drawings, of the current US patent application must be filed separately. For instance, the abstract must be filed on a separate sheet, apart from any other text, not in the manner as provided by applicant on 4/18/05, as discussed above. Also, the disclosure of the specification as provided by applicant on 4/18/05 is deemed to be unacceptable because the disclose submitted 4/18/05 should have been submitted as a separate paper as required by 37 CFR 1.4(c). And, the drawings submitted on 4/18/05 should have been submitted as a separate paper as required by 37 CFR 1.4(c).

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying

Art Unit: 2613

clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claim Objections

2. Claims 1, 8, 12 and 25 are objected to because of the following informalities: the term "quantization" should be spelled as "quantization". Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 12-14, 19, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Singhal (5,333,012).

Regarding claims 1, 2, 12, 13, 19, 24 and 25, Singhal discloses a method for use in a moving pictures encoder for encoding a sequence of segments each having at least one image, comprising the steps of:

determining an overall target bit rate for encoding the sequence of images (col.5, ln.52-55, target bits are determined);

determining a bit allocation and target quantization step size for encoding a first segment on the basis of a segment target bit rate calculated using said overall target bit rate (col.5, ln.22-28 and fig.3, element 27);

encoding said first segment using a variable bit rate encoding method according to the target quantization step size (fig.2, element 200);

determining a difference between the number of bits used to encode said first segment and said first segment bit allocation (col.5, ln.8-14; note variance processor 8 does determine a differential image);

distributing said difference for use in encoding at least one subsequent segment to determine a subsequent segment bit allocation (note the differential image data or the difference, at output of element 8 of ifg.2, is fed into element 27 of fig.3 for determining a subsequent segment bit allocation);

determining a new target quantization step size for encoding a said subsequent segment on the basis of a new target segment bit rate calculated using said segment target bit rate and the distributed difference (see fig.4D and element 30 of fig.3); and

encoding said subsequent segment using a variable bit rate encoding method according to the new target quantization step size (fig.2, note control block 20 determines the new quantization step size and utilizes the new quantization step size 35, obtained by recursive adjustment encoding method as shown in fig.4A, and then feeds the new quantization step size into quantizer 11 for encoding images at VLC 200);

wherein variable bit rate encoding is employed for encoding pictures within a segment whilst maintaining a substantially constant bit rate over said sequence (col.3, ln.29-34 and col.5, ln.3-5, note in fig.2, a recursive rate control encoding scheme is applied to recursively update the quantization step size and in fig.3, note the quantization step size processor 30 utilizes the efficiency coefficient control unit to

Art Unit: 2613

manage the buffer occupancy and recursively apply or maintain the substantially constant bit rate over the sequence of images).

Regarding claims 3 and 14, Singhal discloses the use of a group of pictures having I-picture and optionally at least a P and/or B picture (col.6, ln.20-26; Singhal discloses the use of the intra coded pictures or I pictures, and as well as the use of predictive (P-picture) or bidirectionally predictive (B-picture) coded pictures MPEG encompasses the use of I, P and B frames).

Allowable Subject Matter

5. Claims 4-11, 15-18 and 20-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: Singhal discloses a motion compensation coder employing an image coding control method. The prior art does not specifically disclose the specifics of the equations mentioned in dependent claims 4, 15 and 20.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone

Art Unit: 2613

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Wong
Primary Examiner
Art Unit 2613

AW
4/28/05